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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

RUSSELL, WANDA Z

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/075,500	Applicant(s) AMSHOFF ET AL.	
	Examiner WANDA Z. RUSSELL	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claim 17** is rejected under 35 U.S.C. 102(e) as being anticipated by Ovadia (Pub No. US 2002/0144286 A1).

Ovadia teaches in a transmission system (Fig. 1) comprising a plurality of channels ([0045], lines 2-3), wherein information is transmitted via one or more data transmission channels among the plurality of channels by a modulation arrangement (QAM, [0047], line 7) in which information bits are encoded by symbols selected from a known symbol constellation (it is inherent arrangement of modulation), and further wherein the symbol constellation used for encoding the information bits is selected from a set of symbol constellations established in accordance with a known standard (QAM, [0047], line 7), a channel search method for application at a receiving end of the data transmission channel comprising the steps of:

sequentially scanning (sweeps, [0047], line 1) at least two selected subsets (non-digital, [0045], lines 8-9, and data channel, [0047], line 5) of said plurality of channels ([0045], lines 2-3) for a channel having a data signal ([0047], 3rd line from the end, and

[0045], line 9) modulated thereon in accordance with symbols from one of said symbol constellations established in accordance with said known standard (the "data channel") ([0045]-[0047]. Note that the symbol constellation for encoding is the inherent item of the modulation);

upon not finding the data channel in the sequential scanning step (not achieved, [0047], lines 5-6), scanning at least one (next QAM channel, [0047], line 7), but less than all (510 to 506 -Fig. 5, only data channel, not non-digital), of the selected subsets of the plurality of channels for a channel having a data signal modulated thereon in accordance with symbols from a symbol constellation other than one of said symbol constellations established in accordance with said known standard (the "non-standard data channel") (it is inherent when modulation changes, the symbol constellations change); and

upon not finding the data channel in the sequential scanning step or the non-standard data channel in the step of scanning at least one of the selected subsets, scanning all of said plurality of channels (through the loop bandwidth, [0047], line 9) for a channel having a data signal modulated thereon in accordance with symbols from one of said symbol constellations established in accordance with said known standard ([0047]).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-6, 8-13, and 15, 16, 18, and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ovadia (Pub No. US 2002/0144286 A1), in view of Beser (U.S. Patent 6,212,563 B1).

For **claim 1**, Ovadia teaches in a transmission system (Fig. 1) comprising a plurality of transmission channels ([0045], lines 2-3) wherein at least one of said plurality of channels carries a data signal (data, and [0045], line 9) thereover, a channel search method (Title) for finding a data channel available (identifying data channels, [0014], line 2. Note that [0014] is related to [0045]) for use by a terminal located at a downstream end (116-Fig. 1) of said plurality of transmission channels, said method comprising the steps of:

sequentially scanning (sweeps, [0047], line 1) at least two selected subsets (non-digital, [0045], lines 8-9, and data channel, [0047], line 5) of said plurality of channels ([0045], lines 2-3) for a channel having a data signal ([0047], 3rd line from the end, and [0045], line 9) transmitted at a predetermined modulation protocol (QAM, [0047], line 7); and

if the data channel scanned for in the preceding step is not found (not achieved, [0047], lines 5-6), further sequentially scanning (next QAM channel, [0047], line 7) at least one, but less than all (510 to 506 -Fig. 5, only data channel, not non-digital), of the selected subsets of the plurality of channels for a channel.

However, Ovadia fails to specifically teach having a data signal transmitted at other than said predetermined modulation protocol.

Beser teaches having a data signal transmitted at other than said predetermined modulation protocol (col. 6, lines 65-66).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Ovadia with Beser to obtain the invention as specified, for different modulation protocols.

For **claim 2**, Ovadia and Beser teach everything claimed as applied above (see claim 1). In addition, Ovadia teaches the channel search method of claim 1 including the further step of:

sequentially scanning all of said plurality of channels for a channel having a data signal transmitted at said predetermined modulation protocol ([0047], lines 5-9).

For **claim 3**, Ovadia and Beser teach everything claimed as applied above (see claim 1). In addition, Ovadia teaches the channel search method of claim 1 wherein the first sequential scanning step is repeated at least once prior to beginning the step of scanning at least one of the selected subsets (506 and 510 –Fig. 5).

For **claim 4**, Ovadia and Beser teach everything claimed as applied above (see claim 1). However, Ovadia fails to specifically teach that the modulation protocol is 16 QAM.

Beser teaches that the modulation protocol is 16 QAM (col. 6, line 66).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Ovadia with Beser to obtain the invention as specified, for different modulation protocols.

For **claim 5**, Ovadia and Beser teach everything claimed as applied above (see claim 1). However, Ovadia fails to specifically teach that the modulation protocol is 4 QAM.

Beser teaches that the modulation protocol is 4 QAM (col. 6, line 66).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Ovadia with Beser to obtain the invention as specified, for different modulation protocols.

For **claim 6**, Ovadia and Beser teach everything claimed as applied above (see claim 1). In addition, Ovadia teaches the channel search method of claim 1 wherein data transmitted via said data channel available for use by said terminal is in accordance with the DOCSIS standard ([0025], line 8).

For **claim 8**, it is a bi-directional communication device (Fig. 2) and means for claim of claim 1, therefore it is rejected for the same reason above.

For **claims 9 -13**, they are corresponding to claims 2-6 respectively, therefore they are rejected for the same reason above.

For **claim 15**, Ovadia and Beser teach everything claimed as applied above (see claim 8). In addition, Ovadia teaches the bi-directional communication device of claim 8 wherein the bi-directional communication device is a modem ([0011], lines 1-2).

For **claim 16**, Ovadia and Beser teach everything claimed as applied above (see claim 8). In addition, Ovadia teaches the bidirectional communication device of claim 15 wherein the modem is a cable modem ([0011], lines 1-2).

For **claims 18 and 19**, they are corresponding to claims 4 and 5 respectively, therefore they are rejected for the same reason above.

5. **Claims 7 and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ovadia (Pub No. US 2002/0144286 A1), in view of Beser (U.S. Patent 6,212,563 B1) and Van Beek (Pub No. US 2002/0083465 A1).

For **Claim 7**, Ovadia and Beser teach everything claimed as applied above (see claim 1). However, they fail to specifically teach the Euro-DOCSIS standard.

Van Beek teaches the Euro-DOCSIS standard ([0011], 2nd line from the end).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine xxx et al. with xxx et al. to obtain the invention as specified, for different standards.

For **claim 14**, it is corresponding to claims 7, therefore it is rejected for the same reason above.

Response to Amendment

6. Applicant's amendment filed 4/16/2008 has been received and considered.

Response to Arguments

7. Applicant's arguments, filed 4/16/2008, have been fully considered have been fully considered.

8. Applicant argues that the rejection of Claim 17 is deficient on its face, and the examiner has filed to set forth a prima facie case of obviousness.

The examiner expended the rejection statement for claim 17. See details above. However, all the elements claimed in 17 are included in claim 1 and 2. The rejections

are described in last office action and the rejection remains effective as a whole for claim 17.

9. Applicant argues that the Examiner did not take the time to fill in names of the specific references. The examiner inadvertently missed the reference names. It is corrected in this Office Action.

10. Applicant argues that neither Ovadia nor Beser mention "a predetermined modulation protocol" or "other than said predetermined modulation protocol", as recited in each of Claims 1, 8, and 17.

In response, the Examiner respectfully disagrees.

The first modulation protocol used is the predetermined protocol by definition. As to "other than said predetermined modulation protocol", Beser teaches different QAMs (col. 6, lines 65-66). Claims do not have the language of functional details of the modulation protocols, therefore different QAM 4 and 16 are interpreted as different protocols.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WANDA Z. RUSSELL whose telephone number is (571)270-1796. The examiner can normally be reached on Monday-Thursday 9:00-6:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Seema S. Rao/
Supervisory Patent Examiner, Art
Unit 2616

/Wanda Z Russell/

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